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UNIFIED COMMAND SYSTEM

PLANNING SECTION ORGANIZATION

C PLANNING SECTION

The Area Committee will be the primary oil spill planning body in the MSO Jacksonville area. This committee and its associated subcommittees will meet periodically to ensure that this plan is accurate, current, and reflects the requirements of all concerned individuals and groups in the Plan's AOR.

Although the Area Committee is the primary local planning body, several other organizations at the regional or national level have significant input to local planning.

The Coast Guard (MSO Jacksonville) will assume the role of principal planner. Input and/or changes to the plan will be passed to the Coast Guard who will ensure that the plan is properly updated. Although there are stated intervals for plan updates, more frequent changes, if needed, are desirable.

Committee membership, including subcommittee representation is listed in Tab E to Appendix III to Annex A of this Plan.

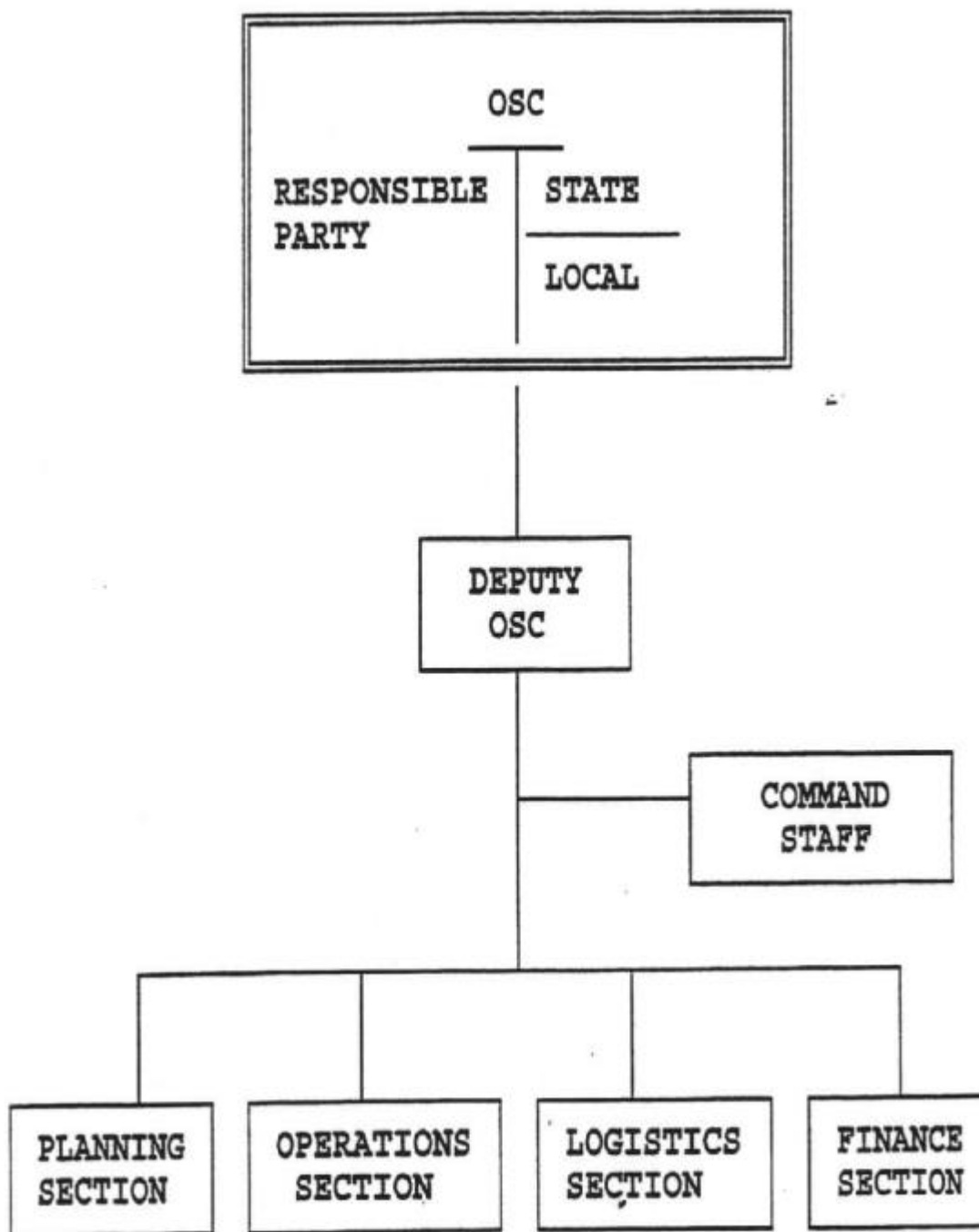


FIGURE 1
UNIFIED COMMAND SYSTEM

C-I PLANNING ORGANIZATION

- A. National Response Team
- B. Regional Response Team
- C. Area Committees Role and Members
- D. ICS Planning Section Roles and Responsibilities
- E. Chemical Countermeasures - dispersants, and other spill mitigating substances
- F. Natural Resource Damage Assessment Unit
- G. Communications Plan
- H. General Protections Strategy Priorities
- I. Environmental Sensitivity Area Maps & Protection Priorities
- J. Identification of Surface Water Intakes
- K. National Historic Preservation Act (NHPA) Consideration
- L. Endangered Species Act (ESA) Considerations/Consultation

C-I-A NATIONAL RESPONSE TEAM

The NRT's membership consists of 15 federal agencies with responsibilities, interests and expertise in various aspects of emergency response to pollution incidents. The EPA serves as chairman and the Coast Guard serves as vice-chairman of the NRT, except when activated for a specific incident. The NRT is primarily a national planning, policy and coordination body and does not respond directly to incidents. The NRT provides policy guidance prior to an incident and assistance as requested by an OSC via an RRT during an incident. NRT assistance usually takes the form of technical advice, access to additional resources/equipment, or coordination with other RRTs.

C-I-B REGIONAL RESPONSE TEAM

There are 13 RRTs, one for each of the ten federal regions and Alaska, the Caribbean and the Pacific Basin. Each RRT has Federal and State representation. EPA and the Coast Guard co-chair the RRTs. The Jacksonville geographic area falls under the cognizance of Region IV. Like the NRT, RRTs are planning, policy and coordinating bodies, and do not respond directly to incidents. The RRTs develop Regional Contingency Plans for their regions. These plans address region specific issues and provide guidance to the OSCs for developing their area plans. The RRTs also provide one level of review for the Area Contingency Plans. The RRTs may be activated for specific incidents when requested by the OSC. If the assistance requested by an OSC exceeds an RRT's capability, the RRT may request assistance from the NRT. During an incident the RRT may either be alerted by telephone or convened. The cognizant RRTs will also be consulted by the OSC on the approval/disapproval of the use of chemical countermeasures when that decision has not been preapproved.

C-I-C AREA COMMITTEE'S ROLE AND MEMBERS

The primary role of the Area Committee is to act as a planning body. Area Committees are made up of experienced environmental/response representatives from Federal, State and local government agencies with definitive responsibilities for the area's environmental integrity. Each member is empowered by their own agency to make decisions on behalf of the agency and to commit the agency to carrying out roles and responsibilities as described in this plan. The pre-designated Federal On-scene Coordinator for the area will serve as chairman of the Committee. He/she will designate the vice-chairman, select the Committee members, and provide general direction and guidance for the Committee. The OSC should solicit the advice of the RRT to determine appropriate representatives from federal and state agencies. The Area Committee is encouraged to solicit advice, guidance, or expertise from all appropriate sources and establish subcommittees as necessary to accomplish the preparedness and planning tasks. Subcommittee participants may include facility owners/operators, shipping company representative, cleanup contractors, emergency response officials, marine pilots associations, academia, environmental groups, consultants, response organizations and concerned citizens. The OSC will appoint the subcommittee members. The OSC directs the Area Committee's development and maintenance of the Area Contingency Plan.

C-I-D ICS PLANNING SECTION ROLES AND RESPONSIBILITIES

The Planning Section (figure 2) includes:

- A. Planning Section Chief;
- B. Resources Unit;
- C. Situation Unit;
- D. Documentation Unit;
- E. Demobilization Unit;
- F. Technical Specialists;
- G. Natural Resource Damage Assessment Unit.

The responsibilities of the Planning Section include:

PLANNING SECTION CHIEF

- (1) Implement and manage the Planning Section branches and units needed to proactively accomplish Planning Section actions.
- (2) Anticipate the need for information describing the status of the response and manage the system required to collect and disseminate response information.
- (3) Provide detailed incident action plans based on projected response needs to the Unified Command.
- (4) Support the Unified Command by evaluating alternative strategies and tactical operation plans that anticipate changing requirements.
- (5) Recommend changes to the UCS organization that anticipates response requirements.

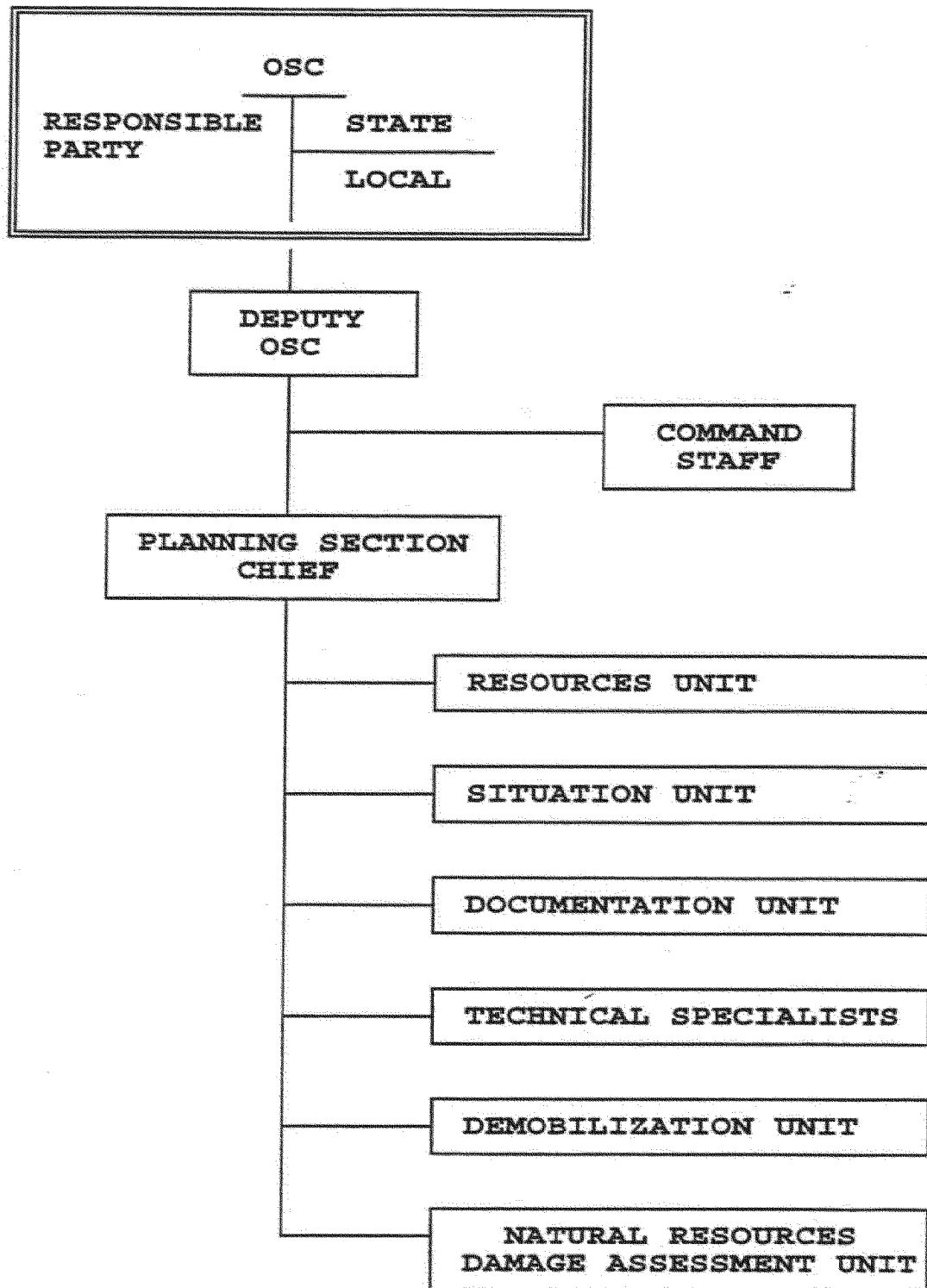


FIGURE 2
PLANNING SECTION ORGANIZATION

RESOURCES UNIT

Collect, analyze, and disseminate information about the status of current and projected response resources, including:

- (a) personnel;
- (b) equipment;
- (c) vessels;
- (d) aircraft;
- (e) vehicles;
- (f) facilities;
- (g) materials and supplies.

SITUATION UNIT

Collect, analyze, and disseminate information about the situation as it progresses, including:

- (a) casualty information;
- (b) discharge information, observations, and forecasts;
- (c) environmental observations and forecasts;
- (d) impacts to natural and economic resources; and
- (e) the status of response operations.

DOCUMENTATION UNIT

Record and protect all documents relevant to the incident.

- (a) Logs;
- (b) Incident reports;
- (c) Press releases;
- (d) Any historically significant material, etc.

Ensure each section is maintaining and providing appropriate documents.

DEMOBILIZATION UNIT

Develop a plan for the demobilization of resources committed to an incident and assist in the implementation of that plan.

TECHNICAL SPECIALISTS

Provide scientific and technical information and analysis to support response planning and operations.

ALTERNATIVE RESPONSE TECHNOLOGY (ART) BRANCH

- (a) Evaluate appropriate opportunities to effectively use ART, including dispersants or other chemical counter measures, in situ burning, bioremediation, or other alternative response technologies.
- (b) Conduct the planning and consultation required to apply a specific ART to the response.
- (c) Identify environmental trade offs associated with application of a specific ART.
- (d) Provide the Planning Section Chief with detailed recommendations and plans regarding the applicability of a specific ART.

NATURAL RESOURCE DAMAGE ASSESSMENT UNIT

- (a) Coordinate Natural Resource Trustees to forecast, identify, and assess natural resource damages.
- (b) Provide the Planning Section Chief with forecasts and analysis of natural resource damages to directly support strategic response planning and assist in the prioritization of removal actions.
- (c) Identify to the Planning Section Chief changes in protection priorities or response activities that could prevent, reduce, or minimize impacts to natural resources.
- (d) Coordinate the NRDA protocols that will be used to evaluate and assess natural resource damages and ensure their consistent application.
- (e) Identify the Lead Administrative Natural Resource Trustee and coordinate NRDA Issues with all Resource Trustees.

C-I-E COMMUNICATIONS PLAN

For events which occur in the Jacksonville area, little communications difficulty can be expected except in the area of radio communications. In the Jacksonville area all organizations are either at or near their office spaces so fax and hardwired telephones are readily available. Cellular phones are also within their home exchange, which will improve reception and ease use. The primary difficulty with radio communications are the limited range of MSO Jacksonville's radio and when public emergency resources such as fire departments are involved. These organizations operate on the 800 Mhz band as opposed to the marine band. The Coast Guard has no 800 Mhz capability.

Communications outside the Jacksonville area will prove to be more difficult. MSO Jacksonville will have to use the resources of USCG Group Mayport to keep in contact with Coast Guard resources via radio. The Coast Guard and many commercial response organizations have mobile command posts from which communications may be conducted. In a prolonged response obtaining hard wire telephone capability to mobile command posts should be a high priority. Radio communications to public emergency response organizations will be more difficult outside of the Jacksonville area due to the reduced availability of equipment. The sharing of equipment between organizations is the best solution for this problem.

Communications Service Co., 3230 Kline Road, Jacksonville, (904) 641-5055. Service and purchase of 800 megahertz two-way radio systems.

Other sources of portable radios, primarily VHF-FM, include the National Strike Force.

AIRTOUCH PAGING, 1-800-989-2166 ext 474. Rent, lease or purchase beepers. Free pickup and delivery.

Emergency telephone service can be arranged by contacting Southern Bell Customer Service (904) 780-2830 weekdays, at all other times call 611 and ask for the Special Services Duty Manager. Indicate that it is an emergency and service must be expedited. A minimum of 6 telephones and 8 lines should be requested with 2 lines suitable for use with facsimile machines.

Mobile/cellular phone service can be contracted through Bell South Mobility at (904) 443-6880 weekdays, at all other times dial (904) 945-0100 or (904) 699-1412.

Each Strike Team has a mobile command post available. Nearest unit is at Gulf Strike Team, Mobile, AL. Can be requested through the National Strike Force Coordination Center.

Navy SUPSALV has one 40' communications trailer and two 20' communications vans available. All are staged at Williamsburg, VA. Can be requested through the Navy representative to the Region IV RRT.

C-I-F GENERAL PROTECTION STRATEGIES

General strategies for response to oil spills in the MSO Jacksonville area are identified in this appendix. The following response priorities will be followed:

- (1) Protect human life and health.
- (2) Minimize ecological impacts.
- (3) Minimize economic and public impacts.

Due to the large amount of environmentally sensitive wetlands and the abundance of endangered and threatened fauna which are common in this area, the best strategy for pollution response is prevention. Should a significant spill occur in the area covered by this plan, there will almost certainly be significant environmental damage.

In the event of a spill the fundamental protection strategy will utilize barrier boom across the mouths of creeks which lead back into areas of marshes, tidal flats and mangrove swamps. This strategy, if successful, will protect the maximum of environmentally sensitive areas with a minimum amount of boom. Exact boom placement for the MSO Jacksonville area is shown on the environmental sensitivity maps in appendix V to this annex.

A second, equally important, protection priority for spills which occur in the Jacksonville/St. Johns

River area is to prevent the spread of oil out of the river via the ICW and other river systems. To accomplish this priority, stairstep booming and collection points will be employed.

The probability of success in both the protection strategies outlined above is dependent on wind and current factors. Currents in excess of 4 knots are common on the St. Johns River, 2.5 knots are expected in the ICW and currents in excess of 1 knot are expected in many of the creeks. The speed of response will determine the amount of damage to environmentally sensitive areas. Due to the amount of boom required, it is clearly not feasible to attempt to protect the face of the marsh areas in a significant spill. In smaller spills this may be an option. It is hoped that the density of the marsh grasses will limit the distance to which the oil can penetrate.

The many environmentally sensitive areas place a high priority on rapid collection of oil. Numerous collection points have been identified in the MSO Jacksonville area. The majority of these locations are suitable for vac truck/skimmer units. The area has numerous vac trucks but few skimmers. Water based skimmers are also critical to rapid removal of oil in this area but are in extremely short supply.

Environmental Sensitivity indexes list 10 types of shorelines. For response purposes, this plan has grouped these 10 types into three categories:

High Sensitivity: Saltmarsh and Mangrove Swamps, Vegetated River Banks, Freshwater Marshes and Swamps, Shellfish Harvesting Areas and Eroding Bluffs

Moderate Sensitivity: Fine Sand Beaches, Coarse/Mixed Sand Beaches, Gravel Beaches, Spoil Sites, Rip Rap, Fill Sites and Tidal Flats

Low Sensitivity: Sea Walls and Piers

Although the drinking water used in this AOR comes from wells and not the rivers, many water intakes are located on the waterways for industrial uses. These water intakes are identified on the various sensitivity maps. When a spill occurs that may result in the contamination of these intakes, the appropriate business shall be notified.

Shoreline cleanup will be conducted in accordance with shoreline sensitivity classification as outlined below.

CLASS A SHORELINE TYPES - HIGH PRIORITY

Vegetated River Banks

Description:

These sites occur as grassy herbaceous vegetation or trees which grow along the river banks to the waters edge. They may occur in fresh or brackish water systems, and may be subject to flooding, depending on the slope of the bank. A variety of plant species may be found along the river banks and will be determined by a number of parameters such as the salinity of the river, steepness of the bank, degree of flooding, and exposure to current. Many of these locations contain archaeological sites. Due to the occurrence of large numbers and diversity of native plant and animal species, the possibility of archaeological sites, the difficulty of cleaning these areas, and the possibility of freshwater contamination, this habitat type was given a class A priority.

Predicted Oil Impacts:

- Small quantities of oil will cover the outer edges of the area, however large quantities of oil may penetrate the sediment and coat the vegetation.
- Biological impacts may be great if oiling is heavy. Freshwater could be affected.
- The aerial extent of surface oiling will also be affected by boat wakes and tides.
- Oil may persist for several months or years if not cleaned.

Recommendations for Cleaning:

- A State of Florida archaeologist should be consulted prior to any cleaning for determination of archaeological significance.

- High energy areas may be cleaned naturally, particularly if oiling is light.
- Low pressure spraying may be effective

Saltmarsh and Mangrove Swamp

Description:

These highly productive marshes typically occur near inlets and along the rivers behind barrier islands. In the northern end of the Jacksonville zone, these marshes are primarily associated with the St. Johns River, St. Mary's River, Nassau Sound, Matanzas River, Tolomato River, and the Halifax River. The predominant plants are cordgrass (*Spartina* sp.) and rushes (*Juncus* sp.) Numerous species of wading birds, waterfowl, fishes, and invertebrates inhabit these marshes. Shellfish harvesting areas are often located in saltmarsh. These areas also provide protection for many commercially important juvenile fish. Alligators and Atlantic salt marsh snakes inhabit these marshes.

Saltmarshes in the southern end of the zone are predominantly associated with the Mosquito Lagoon, Banana River, and the Indian River. These estuarine systems are characterized by mangroves and extensive seagrass beds, in addition to cordgrass and rushes. These marshes support the greatest number of nesting birds on the Florida coast including wading birds, shorebirds, hawks, eagles, and songbirds. Over 600 species of fish have been cataloged in this region. Notable reptiles which occur in these marshes include the Atlantic saltmarsh snake, alligator, and 4 species of threatened and endangered sea turtles.

Predicted Oil Impacts:

- vegetation would become coated by oil, heavy oil may cause smothering of vegetation.
- persistence may be long term because of difficulty in cleaning
- water-soluble toxic fractions of oil may penetrate sediments.
- high degree of biologic stress to mangroves, contamination of food chain

Recommendations for Cleaning:

- Generally cleaning is not recommended, and may cause additional physical damage to the marsh

Seagrass Beds

Description:

Seagrass meadows are one of the most important biological communities in Florida. Seagrasses are highly productive, and are a major basis for coastal water food chains. Their physical structure provides living space and protection from predation for a diversity of organisms.

Seagrass beds are essential nursery and feeding grounds for many marine organisms, especially commercially and recreationally important species and endangered manatee and sea turtles. Seagrasses stabilize sediments and play a key role in nutrient cycling.

Most of the seagrass beds in the Jacksonville MSO AOR are in Mosquito, Indian River and Banana River Lagoons. Large areas of shallow (<1 m) seagrass meadows occur in these waterbodies. The most abundant species is shoal grass (*Halodule wrightii*). Other seagrass species occurring in the plan area are manatee grass (*Syringodium filiforme*), widgeon grass (*Ruppia maritima*), star grass (*Halophila engelmanni*), and paddle grass (*Halophila decipiens*).

Predicted Oil Impacts:

- Oiling of seagrass blades would result in blade defoliation. Loss of seagrass and algal production, habitat and food for marine organisms. Could take 6 to 12 months to recover. Greatest impact to grasses exposed at low tide and those with blades extending to or near water surface.
- Heavy or weathered oil could sink and smother grass beds. Same effects on grass blades and shoots as above.
- Oil could have toxic impacts (lethal and sublethal) on invertebrates and fishes inhabiting grass beds. Juvenile forms would be most vulnerable. Greatest effects in shallow (<1 m) grass beds.
- Oiling of sediments would impact seagrass rhizomes and roots (below ground plant tissues) and infauna. Likely to occur if oil sinks. Potential effects: below ground seagrass mortality; infauna mortality; productivity loss; sediment destabilization; habitat destruction. Effects greatest in shallow grass beds. Recovery time at least 1 to 2 years, likely more.

Recommended Response Activities:

- Prevent oil from entering grass beds.
- Care should be taken to not prop scar grass beds by boats involved in response activities.
- Extreme care should be taken to not disturb sediments during cleanup activities; otherwise could result in complete loss of grass bed.
- Clean up efforts onshore (e.g., water washing/flushing) should not result in deposition of oiled sediments into grass beds.
- Before and during cleaning, must evaluate if cleaning activities will be (is) more detrimental to grass bed than oil, and effectiveness of cleaning process.
- Oiled Intertidal or Exposed Grass Beds: Do not clean oiled grass blades; blades will slough off naturally. If oil is on sediment surface, remove by vacuum or hand. Minimize disturbance and removal of sediment and below ground seagrass.

- Sunken Oil in Submerged Grass Beds: Remove from grass bed by hand (prefer) or vacuum. Minimize disturbance and removal of sediment and below ground seagrass. Do not worry about incidental removal of above ground grass (blades, shoots) during cleanup; these will slough off naturally.

Freshwater Marshes and Swamps

Description:

Freshwater marshes within the Jacksonville Captain of the Port Zone occur in the floodplains of the St. Johns River and associated tributaries. These marshes are characterized by emergent herbaceous plants, fluctuating water levels, and recurring fires. Typical plant species include pickerelweed, maidencane, sawgrass, cordgrass and rushes. These marshes are also important breeding grounds for all classes of vertebrates, particularly reptiles and amphibians dependent on these wetland resources. Freshwater marshes perform other functions such as providing flood control by acting as sinks, as freshwater storage areas, fisheries production, and recreation.

Freshwater Swamps are distinguished from marshes by the abundance of trees, and are basically wooded wetlands. They occur along the St. Johns River throughout the Jacksonville Zone. Cypress trees are the dominant wetland tree in this zone, however other water tolerant species include pond pine, cabbage pond, black gum, willow, and laurel oak. These river swamps are thought to be the most biologically diverse type of swamp, providing food, cover, and nesting areas for a number of animals. Benthic invertebrates such as crayfish, clams, snails, and insect larvae inhabit swamps, as do numerous fish, some rare and endangered. A variety of birds and mammals utilize swamps at least some part of the year, notably river otters which feed on the crayfish, black bear, Florida panthers, and mink, all considered to be rare, threatened, or endangered, and swallow tail kites and Mississippi kites which nest in swamps.

Predicted Oil Impacts:

- Oil would be persistent because of the low flushing of freshwater marshes and swamps.
- Oil may cling to the vegetation further reducing natural cleaning; high mortality for resident animals
- Vegetation may be seasonally sensitive, with dormant vegetation being less sensitive than blooming and seeding plants
- Freshwater supplies may be contaminated by small amounts of oil.

Recommendations for Cleaning:

- Consider burning in freshwater marsh, which is fire adapted community.
- Manual cleaning from boat
- Avoid any activity which mixes oil into sediment
- Natural recovery recommended for light oiling.

Shellfish Harvesting Areas

Description:

In addition to the economic value of oysters and other shellfish, these mollusks provide habitat and food for a variety of other estuarine organisms. Most shellfish areas are found along inshore coastal habitats, including the ICW, St. Johns estuaries, Banana River, Tolomato River, and the Indian River Lagoon. Oysters spawn from late spring to early fall in these estuarine areas. The larvae of oysters require a solid substrate, and generally utilize existing colonies for attachment. Mollusks are filter feeders and rely on algae and suspended and dissolved organic matter for sustenance.

Predicted Oil Impacts:

- Most oyster reefs are intertidal and would be coated with oil during ebbing tides.
- Oysters are in danger of smothering from silting of sediments suspended in the water column.
- Large economic losses predicted if oiling occurs in shellfish harvesting areas.

Recommendations for Cleaning:

- Do not use clean-up methods which stir up bottom sediments or mechanically damage oyster reefs.
- Natural cleaning is probably the best approach, however may consider low pressure cold wash.

Eroding Bluffs

Description:

Eroding Bluffs or riverbanks are located along high energy river systems. Roughly 85% of eroding bluffs in Northeast Florida contain archaeological sites. Many of these archaeological sites are shell middens, which were used as refuse areas by early man. They may contain pottery shreds, human and animal bones, ceramic wares, and arrowheads and other Indian hunting points. Biological diversity may be low, typically, however these sites are given a high sensitivity classification because of their archaeological significance.

Predicted Oil Impacts:

- Oil will disperse to the high tide line
- Oil may penetrate the sediments, particularly if they are sandy

Recommendations for Cleaning:

- An archaeologist from the Division of State must be consulted prior to any cleaning activity.
- Cleanup may be natural, depending on waves and currents as well as sediment type.
- Oil may be hand scraped off the substrate, if approved by archaeologist.

CLASS B SHORELINE TYPES - MODERATE PRIORITY

Fine Sand Beaches

Description:

This shoreline type is very common on the barrier islands of Northeast Florida. These beaches may be backed by dunes in the rural areas or seawalls in the more urban areas. These beaches are typically hard packed and exposed to varying degrees of wave and current energy, depending on their location (inland or coastal). Oil penetration into the sediments would be shallow. These properties of fine sand beaches render them among the easiest of all shoreline types to clean. Often, they are fronted by tidal flats, particularly along the sheltered areas. They may be important recreational and/or economic resources. Biological diversity and density may be low, however seasonal use by seabirds and marine turtles may be high.

Predicted Oil Impacts:

- oily bands along upper intertidal zones, varying in intensity with amount of product accumulated.
- shallow penetration of oil into sediment
- danger of oiling of seabirds or other organisms in intertidal zone

Recommendations for Cleaning:

- care should be taken to prevent mechanical mixing of oil deeper into sediments
- minimize amount of sand removed from beach
- Caution should be exercised in dune areas, particularly where concentrations of the endangered beach mouse exist.

Coarse/Mixed Sand Beaches, Gravel Beaches, Spoil Sites, Rip Rap, and Fill Sites

Description:

These shoreline types are plentiful along the coast as well as inland along riverbanks. Biological diversity and/or density may range from low along the coarse sand beaches to high among gravel beaches and rip rap. These shoreline types were classified as Class B sensitivity in spite of the fact that they are generally cleanable, because of the species richness of gravel beaches and rip rap, and because of the threatened and endangered species which utilize sand beaches and fill and spoil sites.

Predicted Oil Impacts:

- Oil may penetrate deeply into sediments on coarse sand beach, with toxic effects primarily on epifaunal amphipods
- Little penetration of oil into fill.
- Oil will penetrate between boulders of rip rap, causing lethal effects on resident flora and fauna.
- Any toxic effects on invertebrates in any of these shoreline types will have effects on grazing shorebirds.

Recommendations for Cleaning:

- On coarse or mixed grain beach, minimize sand removal; manual cleanup most effective
- Avoid excessive removal of sediment from fill, manual cleanup or low pressure spray
- Remove oiled debris from rip rap, consider spraying, and or replacement of heavily oiled rip rap to prevent chronic leaching.

Tidal Flats

Description:

Exposed tidal flats are primarily composed of sand and mud in shallow areas where currents and waves are sufficient to mobilize sand. The sediments are water-saturated and only the higher elevations dry out during low tide. Large numbers of polychaetes, copepods, amphipods, fiddler crabs, and snails render tidal flats exceptional foraging grounds for birds. Vegetation may be present at the higher elevations.

Sheltered tidal flats are generally located along lagoonal beaches, waterward of saltmarshes, and other-calm water locations. Sediments are extremely soft, consisting primarily of silt and clay. Although rooted vegetation is sparse, microscopic algae form the basis of the food chain. A multitude of birds are attracted to these tidal flats to feed on mollusks, crabs, shrimp, flounder, mullet, and a variety of infaunal invertebrates. Many of the birds which loaf or forage on sheltered tidal flats from extensive nesting colonies in nearby upland areas.

Predicted Oil Impacts:

- Oil would not be expected to penetrate water saturated sediments, but may coat the surface layer on an ebbing tide.
- Biological damage severe; impacts from smothering
- Persistence may be long term in sheltered flats

Recommendations for Cleaning:

- Deployment of sorbents from shallow-draft boats
- Careful removal of oiled wrack
- Mechanical damage from walking on flats can be severe

CLASS C SHORELINE TYPES - LOW PRIORITY

Sea Walls and Piers

Description:

These shoreline types are common in urban areas for protection of residential and industrial properties. They are typically constructed of concrete, stone, wood, or metal and are often inhabited by barnacles, shellfish, and algae. These shoreline types were given a low priority ranking because of their ease in cleaning, short time period for recruitment and re-establishment of biota.

Predicted Oil Impacts:

- Oil may percolate between joints of wooden or stone structures
- Some biota would be damaged, other species would exhibit greater tolerance.
- Persistence would be dependent upon exposure to high energy waves and currents

Recommendations for Cleaning:

- High pressure washing to prevent chronic leaching.

Rocky Platforms

Description:

This shoreline type is rare in Northeast Florida and is typically associated with some other shoreline type. In general, these rocky areas can be found on shorelines facing the open ocean where they are exposed to high energy waves and currents. This shoreline type was classified as low sensitivity because of this high energy exposure as well as ease in cleaning. The biotic assemblage of this shoreline type consists primarily of infaunal polychaetes and amphipods which display low sensitivity to oiling.

Predicted Oil Impacts:

- Oiled wrack and/or heavy oils may accumulate in depressions along rocks, slowing natural cleaning
- Amphipods and isopods relatively tolerant of toxic effects of oil, however thermal absorbance capacity or rock surface may be increased.

Recommendations for Cleaning:

- Removal of oiled wreck
- High-pressure spray may be effective where plants and animals are not attached
- Natural cleaning in high energy areas

C-I-G ENVIRONMENTAL SENSITIVITY AREA MAPS & PROTECTION PRIORITIES

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C-I-H WATER INTAKE FACILITIES

Included in this section are the locations of selected "significant" water intakes. Those selected are important to either public health and safety or major industry.

INTAKE DESCRIPTION

JACKSONVILLE ELECTRIC AUTHORITY

NORTHSIDE GENERATING STATION

JACKSONVILLE, FL

JACKSONVILLE ELECTRIC AUTHORITY

SOUTHSIDE GENERATING STATION

JACKSONVILLE, FL

JACKSONVILLE ELECTRIC AUTHORITY

KENNEDY GENERATING STATION

JACKSONVILLE, FL

FLORIDA POWER AND LIGHT

PUTNAM PLANT

EAST PALATKA, FL

FLORIDA POWER AND LIGHT

CAPE CANAVERAL PLANT

COCOA, FL

ORLANDO UTILITIES COMMISSION

INDIAN RIVER POWER PLANT

TITUSVILLE, FL

C-I-I CHEMICAL COUNTERMEASURES: DISPERSANTS AND OTHER SPILL MITIGATING SUBSTANCES

The area covered by this plan contains a very high percentage of environmentally sensitive areas. The environmental sensitivity is primarily due to marsh habitat, shore birds, open shellfish beds, and habitat for several threatened and endangered species. Detailed description of the environmental sensitivity of the area may be found in annex A to this plan.

The swift river currents coupled with the extensive marsh habitat make protection of sensitive shoreline difficult. Currents of up to 2.5 kts. are common in the ICW and main river channels. Currents in excess of 1 kt. are common in tributary creeks which drain marsh areas. The above criteria indicate that shoreline protection will only be effective for little more than a brief period of time. This places extreme importance on rapid removal of oil from the water. Unfortunately, as shown in the equipment lists in annex F to this plan, there is an inadequate number of oil removal devices (land or water based skimmers) in this area.

Spills offshore in this area are judged to be unlikely. In the event that one should occur, the projected area in which the oil would impact the shoreline along with the characteristics of the oil will determine whether dispersants should be considered as a cleanup method. Dispersants should be considered for use in water depths greater than 30 feet when oil is projected to impact areas of marsh or beaches with ecological or economic importance. These areas are judged to be essentially impossible to protect using boom. Damage, especially to shorebird nesting areas, is likely to be much more severe than the damage caused by the dispersed oil and dispersant. If the oil is predicted to impact sand beaches with little impact on sensitive environment of wildlife, the environmental reasons for using dispersants are greatly reduced. While this does not preclude the use of dispersants to protect recreational resources, it does reduce the ecological benefit.

In general, dispersants should not be considered for use in inshore areas (harbors, ICW, rivers, and creeks). In these areas the water depth is generally too shallow and the proximity of fauna living in the water column too close to allow successful dispersion without significant damage to the fauna. While failing to disperse oil in these areas will cause damage to wading and diving birds, marsh mammals and intertidal organisms, this damage is likely to be less severe than the damage caused to organisms living in the water column, especially if devices, such as noise cannons, are employed to frighten birds.

Application of chemical countermeasures for spill remediation is regulated under Subpart J of 40 CFR PART 300, the National Contingency Plan (NCP). The NCP provides that the On-Scene Coordinator (OSC) with the concurrence of the USEPA representative to the Regional Response Team and the States with jurisdiction over the navigable waters threatened by the oil discharge, and in consultation with the U. S. Department of Commerce and U. S. Department of the Interior natural resource trustees, may authorize the use of dispersants and other chemical agents on oil

discharges. All such dispersants or chemical agents shall be listed on the USEPA NCP Product Schedule.

The use of sinking agents is expressly prohibited by the National Contingency Plan.

IN SITU BURNING

The Region IV Regional Response Team policy statement dated April 1995 explains in detail the factors to be evaluated when the RRT is considering the use of in situ burning. Tab A of this appendix is extracted from that policy statement and intended for the OSC and SSC to use in evaluating in situ burning. Information on in situ burning equipment is found in Tab B.

The volume of oil that can be removed by in situ burning is the primary benefit to this countermeasure. In August of 1993, a joint US/Canada in situ burning experiment off the coast of Newfoundland contained and burned 12,760 gallons of Alberta Crude in 90 minutes with 99% efficiency. Considerable research has been presented on the theory and practical application of in situ burning. Through this research, these parameters have been developed:

In situ burning of uncontained oil is usually not effective. The oil slick must be a minimum of 0.11 inches (2 mm) thick for effective ignition. While uncontained oil can be ignited, the burn efficiency will be significantly lower than when burning contained oil.

If the slick thickness is greater than 0.11 inches, almost any type of oil can be ignited and burned in situ. Extreme weather conditions, heavy weathering of the oil and significant emulsification of the oil are factors that make ignition and burning more difficult. High viscosity oils will burn well once ignited.

In situ burning is very time sensitive. Emulsification of the oil makes it more difficult to ignite. Although emulsions up to 70% water will ignite under the correct conditions, burn efficiencies will be reduced.

The normal upper environmental limits for ignition are winds of 20 knots or less and seas of 4 feet or less. Fresh or unemulsified oil can usually be ignited at well above these limits.

In situ burning reduces the slick thickness about 0.1 inches (2 mm) per minute or about 0.07 gallon per minute per square foot of oil.

PRE-AUTHORIZATION OF IN-SITU BURNING

The term "in-situ" applies to operations conducted for removal of oil by burning. These operations may apply during daylight or nighttime hours. In-situ burning operations will be conducted within the jurisdiction of the RRT IV region in accordance with this agreement and, in addition, where applicable, in accordance with protocols established in Letters of Agreement (LOA) between the USCG, EPA, DOI, DOC, and the affected state(s). The authority to authorize the use of in-situ burning provided under this Agreement to the USCG OSC may not be

delegated. The following three zones have been established to specify pre-authorized locations and conditions under which burning may occur:

"A" ZONES -- PRE-AUTHORIZATION FOR OPEN-WATER

The "A" zone is defined as any area in Region IV, falling exclusively under federal jurisdiction; and not classified as a "B", or "R" ZONE; which is at least 3 miles seaward from any state coastline; and seaward of any state waters, or as designated by separate LOAs with each individual state, the USCG, EPA, DOI, and DOC. In the event that state jurisdiction extends beyond 3 miles from a state shoreline, pre-approval for the "A" zone applies only to those areas outside state jurisdiction unless a LOA is in place and specifically pre-authorizes in-situ burning within those state waters.

Within "A" zones, the USCG, EPA, DOC, DOI, and the state(s) agree that the decision to use in-situ burning rests solely with the pre-designated USCG OSC, and that no further approval, concurrence or consultation on the part of the USCG or the USCG OSC with EPA, DOC, DOI, or the state(s) is required.

The USCG agrees with EPA, DOC, DOI, and the state(s) that the USCG will immediately notify said agencies and affected state(s) of a decision to conduct burning within the "A" zone, via RRT IV representatives.

"B" ZONES -- WATERS REQUIRING CASE-BY-CASE APPROVAL

A "B" zone is defined as any area in the RRT IV region falling under state or special management jurisdiction which is not classified as an "A", or "R" zone.

"B" zones are all areas falling: 1) anywhere within state waters, 2) waters less than 30 feet in depth that contain living reefs, 3) waters designated as a marine reserve, National Marine Sanctuary, National or State Wildlife Refuge, unit of the National Park Service, proposed or designated Critical Habitats, and 4) mangrove areas, or coastal wetlands. Coastal wetlands include submerged algal beds and submerged seagrass beds.

Where a LOA is in effect between the USCG, EPA, DOI, DOC, and the affected state(s); the policy for pre-authorization established under the provisions of said LOA shall preempt the policy herein established for zones otherwise designated as falling in the "B" zone. In the event that a Letter of Agreement is not in effect for areas falling within the "B" zone, the following protocols shall apply:

- 1) If the OSC feels that in-situ burning should be used in areas falling in a "B" zone, a request for authorization must be submitted to the RRT and the affected state(s), along with the required information listed in the in-situ burning Application/Checklist form, found in Appendix VI of the RRT IV In-situ Burn Policy.
- 2) The OSC's decision to use in-situ burning shall be made after consulting with RRT IV representatives of state and federal trustee agencies to ensure that the best available information pertaining to the presence or absence of natural resources at the burn site is obtained.
- 3) The OSC is only granted authority

to conduct in-situ burning in the "B" zone when consent has been given by EPA and the affected state(s) and after consultation with, DOI and DOC. 4) The RRT IV will respond to the OSC's request for authorization to burn in zone "B" within four hours from the time of notification. If the RRT IV has not responded to a request for authorization to burn in zone "B" within four hours, then the OSC may proceed with in-situ burn operations.

The USCG agrees with EPA, DOC, DOI, and the state(s) that the USCG will immediately notify said agencies and affected state(s) of a decision to initiate an approved burn within a "B" zone via RRT IV representatives.

"R" ZONES -- EXCLUSION ZONES

An "R" zone is defined as any area in the RRT IV region falling under state or special management jurisdiction which is not classified as an "A" or "B" zone.

The "R" zone is that area designated by the RRT IV as an exclusion zone. No in-situ burning operations will be conducted in the "R" zone unless 1) in-situ burning is necessary to prevent or mitigate a risk to human health and safety; and/or 2) an emergency modification of this agreement is made on an incident-specific basis.

RRT IV currently has not designated any areas as "R" zones, but retains the right to include areas for exclusion at a future point in time if it feels this is warranted.

PROTOCOLS

The following requirements apply to the use of all burning operations under the provisions of this policy:

1. Health and Safety Concerns -- Operators: Assuring workers' health and safety is the responsibility of employers and the USCG OSC who must comply with all Occupational Health and Safety Administration (OSHA) regulations. Prior to any in-situ burn operations, a site safety plan must be submitted and approved by the OSC. Public : The burning should be stopped if it is determined that it becomes an unacceptable health hazard due to operational or smoke exposure concerns to responders or the general public. If at any time, exposure limits are expected to exceed national federal air quality standards in nearby populated areas, as a result of in-situ burning operations, then in-situ burning operations will immediately cease. The Level of Concern (LOC) for particulates for the general public in the RRT IV region is 150 ug/m3 (PM-10) averaged over 1 hour.
2. Monitors representing the USCG, EPA, federal trustee agencies, the affected state(s), OSHA, and the responsible party will have the opportunity to observe in-situ burning operations. Monitoring to establish "Continue/Discontinue" data for input to the OSC will be conducted in accordance with protocols established by the Region IV Regional Response Team as outlined in the monitoring program contained in appendix VI of the Region IV In-situ Burn Policy. Unless smoke plumes are predicted to cross over populated or environmentally sensitive areas, an inability to conduct monitoring operations will not be automatic grounds for discontinuing or prohibiting in-situ burn operations. All burns must incorporate visual monitoring at the burn site to record the

disposition of burn residues and to monitor the burn site for potential impact to any natural resource in the area. Samples of the residue will be collected if feasible.

3. Prior to any in-situ burning operations, the OSC will apply the decision tree contained in appendix VI of the Region IV In-situ Burn Policy.

4. The application/checklist form in appendix VI of the Region IV In-situ Burn Policy shall be completed for all burns and provided to RRT IV members in a timely manner for documentation and informational.

5. The USCG will make every reasonable effort to continuously evaluate the decision to burn, and allow RRT agencies and affected state(s) the opportunity to comment. Formal request to discontinue a burn should be presented, in writing to the OSC for consideration.

6. Burning will be conducted in a way that allows for effective control of the burn, to the maximum extent feasible, including the ability to rapidly stop the burn if necessary. Contained and controlled burning is recognized as the preferred method of burning using fire-resistant boom. All practical efforts will be made to control and contain the burn and prevent accidental ignition of the source. Generally it is not recommended that the source or adjacent uncontained slicks be allowed to ignite during in-situ burning operations. Certain circumstances, however, may warrant consideration of carefully planned source ignition.

7. Mechanical recovery equipment shall be mobilized on-scene, when feasible, for backup and complimentary response capability. Provisions must be made for collection of burn residue following the burn(s).

8. In-situ burning will be conducted in accordance with any consultations approved by the USFWS and the NMFS, under Section 7 of the Endangered Species Act. Prior to beginning an in-situ burn, an on-site survey will be conducted to determine if any threatened or endangered species are present in the burn area or otherwise at risk from any burn operations, fire, or smoke. Appropriate natural resource specialists, knowledgeable with any special resource concern in the area and representing the resource trustee, will be consulted prior to conducting any in-situ burn. Measures will be taken to prevent risk of injury to any wildlife, especially endangered or threatened species.

Examples of potential protection measures may include: moving the location of the burn to an area where listed species are not present; temporary employment of hazing techniques, if effective; and physical removal of individuals of listed species only under the authority of the trustee agency.

9. In-situ burning is advised only when meteorological and sea conditions are operationally favorable for a successful burn. The OSC will give due consideration to the direction of the wind, and the possibility of the wind blowing precipitate over population centers or sensitive resources onshore. A safety margin of 45 degrees of arc on either side of predicted wind vectors should be considered for shifts in wind direction.

10. Any use of in-situ burning requires that a post-incident report be provided by the OSC, or a designated member of the OSC's staff, within 45 days of in-situ burning operations. Recommendations for changes or modification to this policy should be presented in the report, if appropriate. This report will be presented at a Region IV RRT meeting, if requested by the RRT.

FIRE BOOM

Manufacturer of fire boom is: Minnesota Mining & Manufacturing, 3M Center Building 225-4N-07, ST Paul, MN 55144-1000. 3M does not maintain inventory in stock. As of September 1993, the only large stock available is 6000 feet held by the Cook Inlet Spill Response Cooperative. According to the coop's general manager, Bill Stilling, they will allow the Coast Guard to take up to 2500 feet of fire boom. If not used in the water, boom is rental only. If used in the water, the Coast Guard buys it. A second stockpile has been identified: Amoco Production Division holds 1500 feet of 18 inch 3M fire boom at Houston, TX. Negotiations are underway to send 750 feet to South Hampton, United Kingdom and 750 feet to Clean Caribbean Cooperative in FT Lauderdale, FL.

Another possible source of fire boom is American Marine, in Cape Canaveral, FL. This company has just arranged with 3M in 1994 to start building fire boom. Quantities that will be stockpiled and available for immediate use are unknown.

Three sets of fire boom are required for maximum effectiveness. Each set will consist of 500 feet (ten 50 foot sections) of boom. The largest boom available has a float diameter of 18 inches, a skirt length of 24 inches and a linear weight of 15.3 pounds per inch. The maximum net weight of each set would be 7650 pounds. If available, the largest size boom is desired.

For emergency procurement of fire boom, contact the Cook Inlet Spill Response Cooperative. The fire boom is already palletized and they will deliver by truck to Kenai or Keniska Airport, the nearest airports capable of handling a C-130 aircraft. Request aircraft support through the appropriate channels.

Special considerations: Commanding Officer of the Pacific Strike Team is the Coast Guard's representative to the National Response Team for in situ burning. Request assistance through the NSF Coordination Center.

C-I-J NATIONAL HISTORIC PRESERVATION ACT CONSIDERATION

This section is reserved until further guidance is provided by Commandant, United States Coast Guard.

C-I-K ENDANGERED SPECIES ACT (ESA) CONSIDERATIONS / CONSULTATION

This section is reserved until further guidance is provided by Commandant, United States Coast Guard.